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April 28, 2009

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Reference: Biological Resources Survey for Calavo Drive Drainage Improvement Project  
(RECON Number 5119) (WA# - FCDT – 00255)

### **Summary**

RECON conducted a Biological Resources Survey on and in the immediate vicinity of the drainage crossed by Calavo Drive between Louisa Drive and Rancho Road, in the unincorporated community of Casa de Oro (Figures 1 and 2).

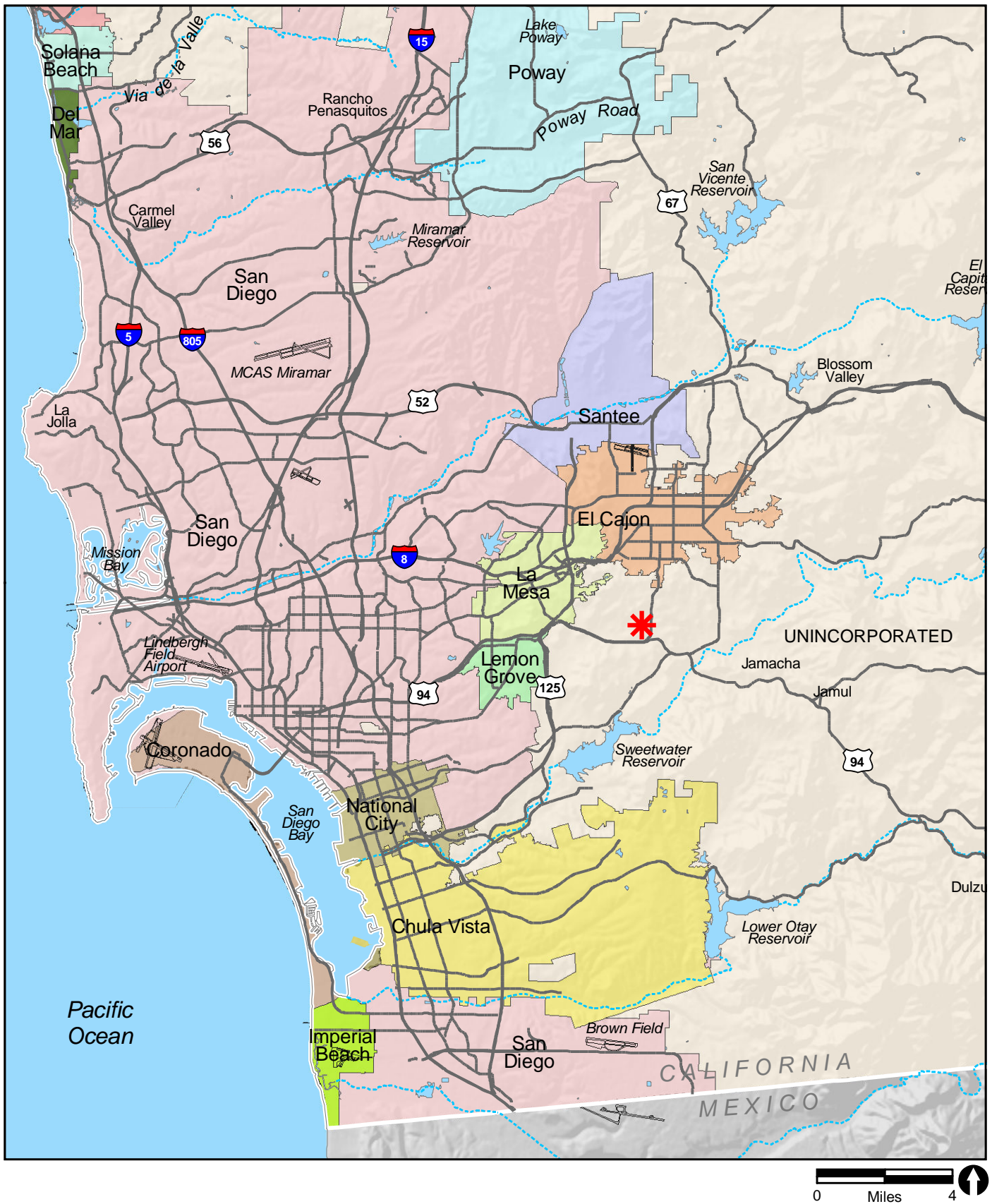
The results of this survey and a wetland delineation conducted on-site are provided herein. To summarize, no special status plants were detected in the survey area. One special status animal species, Cooper's hawk (*Accipiter cooperii*), was observed flying overhead, and avoidance measures have been proposed. Wetland resources under the jurisdiction of the U.S. Army Corps of Engineers (ACOE), California Fish and Game Department (CDFG), and the Regional Water Quality Control Board (RWQCB) have been delineated on-site and are expected to be impacted by the proposed project. Mitigation measures have been proposed to offset these unavoidable impacts.

### **Introduction, Project Description, Location, Setting**

The County of San Diego proposes an improvement to the culvert beneath Calavo Drive north of Rancho Road and south of Louisa Drive where Mexican Canyon Creek flows. The survey area is shown on the U.S. Geological Survey (USGS) El Cajon quadrangle, and occurs within Section 27, Township 16 South, Range 1 West (see Figure 2). An aerial photograph of the survey area shows that the site is centered around the culvert crossing of Mexican Canyon Creek (Figure 3).

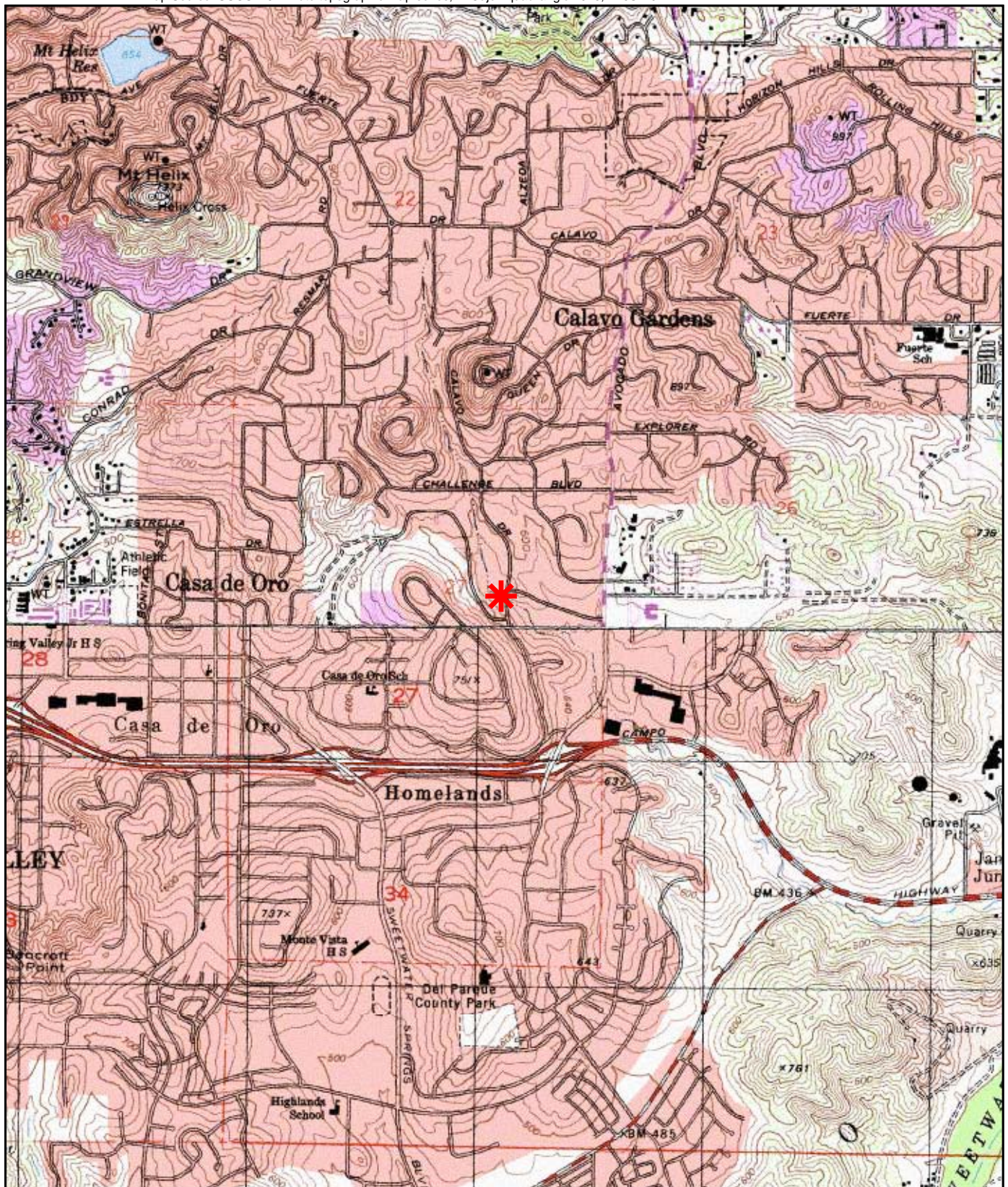
The proposed project will entail the replacement of an existing sixty-inch (60") corrugated metal pipe (CMP) type culvert. The new culvert will consist of a ten-foot by eight-foot (10'x8') box culvert, approximately 95 feet long (approximately 120 feet wide with wing walls). Rip rap energy dissipaters will be placed at the inlet and outlet of the culvert. RECON's survey area, totaling 2.47 acres, includes the 0.45 acre construction limit and a surrounding 100-foot buffer (see Figure 3).

A focused assessment of biological conditions was conducted within the survey area on March 31, 2009, by RECON biologist John Lovio. The assessment occurred between 3:00 P.M. and 4:00 P.M.; weather conditions were 73° Fahrenheit with clear sky, and wind 3 to 5 mph from the west. Vegetation communities were mapped on an aerial photograph (1 inch = 50 feet) flown in



 Project Location





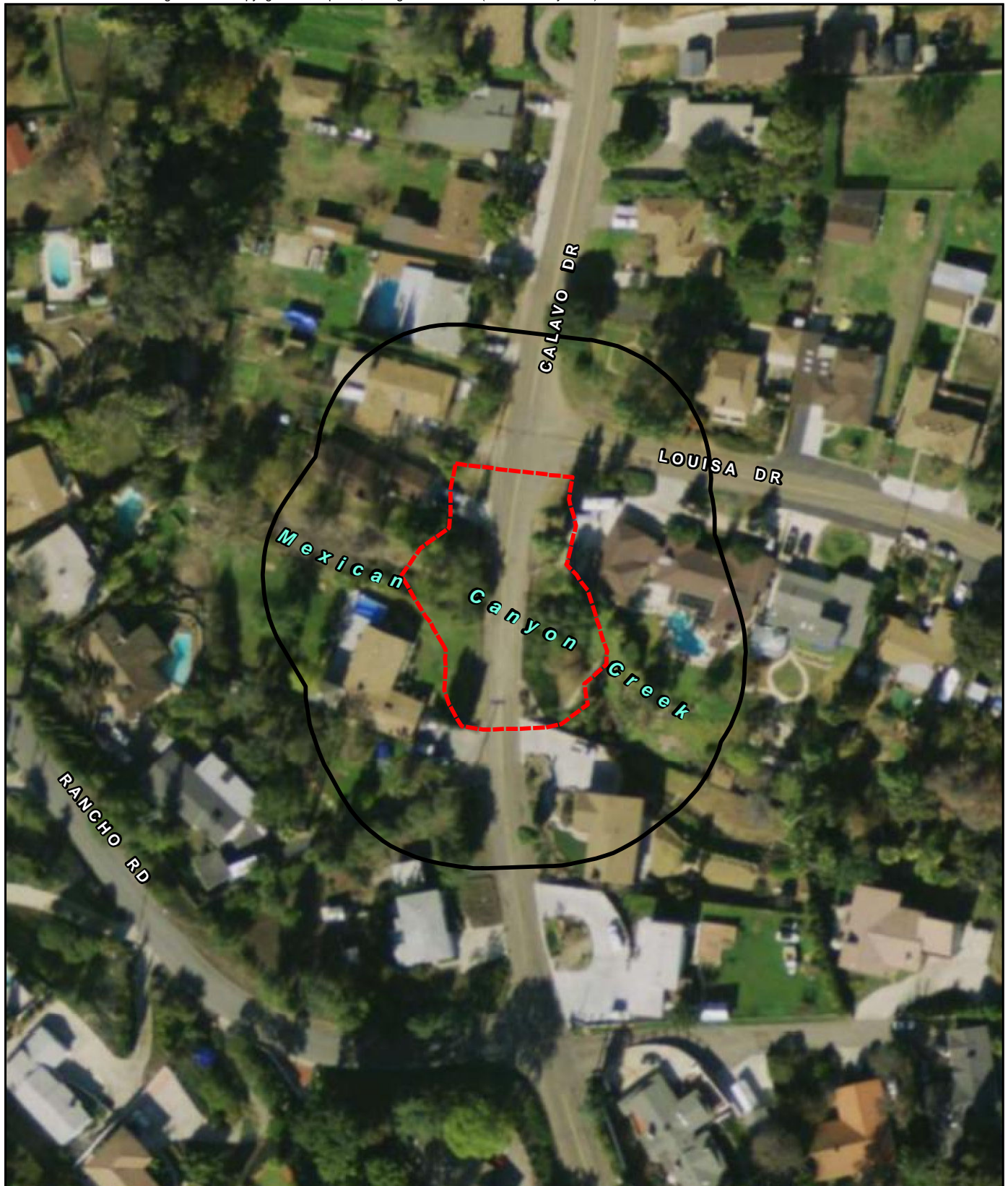
 Project Location





FIGURE 2

Project Location on USGS Map





-  Survey Area
-  Construction Limits



January 2008. The wetland delineation and a second general biology survey was conducted by RECON biologist Jennifer MacAller on the morning of April 5, 2009.

Determination of the potential occurrence for listed, sensitive, or noteworthy species is based upon known ranges and habitat preferences for the species (Jennings and Hayes 1994; Unitt 2004; State of California 2009a–d; California Native Plant Society [CNPS] 2007; Reiser 2001) and species occurrence records from the California Natural Diversity Database (CNDDB; State of California 2009e).

Floral nomenclature for common plants follows Hickman (1993), and for sensitive plants follows CNPS (2007). The survey included a directed search for sensitive plants that would have been apparent at the time of the survey. Animal species observed directly or detected from calls, tracks, scat, nests, or other sign were noted. The wildlife surveys were limited by seasonal and temporal factors. Surveys were performed during the day; therefore, nocturnal animals were identified by sign that was apparent at the time of the surveys. Zoological nomenclature for birds is in accordance with the American Ornithologists' Union Checklist (1998) and Unitt (2004); for mammals, Baker et al. (2003) and Hall (1981); for amphibians and reptiles, Crother (2001) and Crother et al. (2003); and for invertebrates, Eriksen and Belk (1999), Mattoni (1990), and Opler and Wright (1999).

### **Regional Context**

The survey area is within the boundaries of the Draft North County MSCP Subregional Plan, but does not occur within a pre-approved mitigation area (SanGIS 2005).

Mexican Canyon Creek, as named in The Thomas Guide of San Diego County (1998), begins as a spring north of the survey area near Fuerte Drive and flows in a south and southeasterly direction through the communities of Casa de Oro and Rancho San Diego along Highway 94 until it reaches the Sweetwater River just southeast of the Highway 94 and Highway 54 intersection. The creek is surrounded by semi-rural residential development, with large lot sizes and copious non-native tree and shrub plantings. The creek has been retained over decades of gradual development in an area of former avocado orchards.

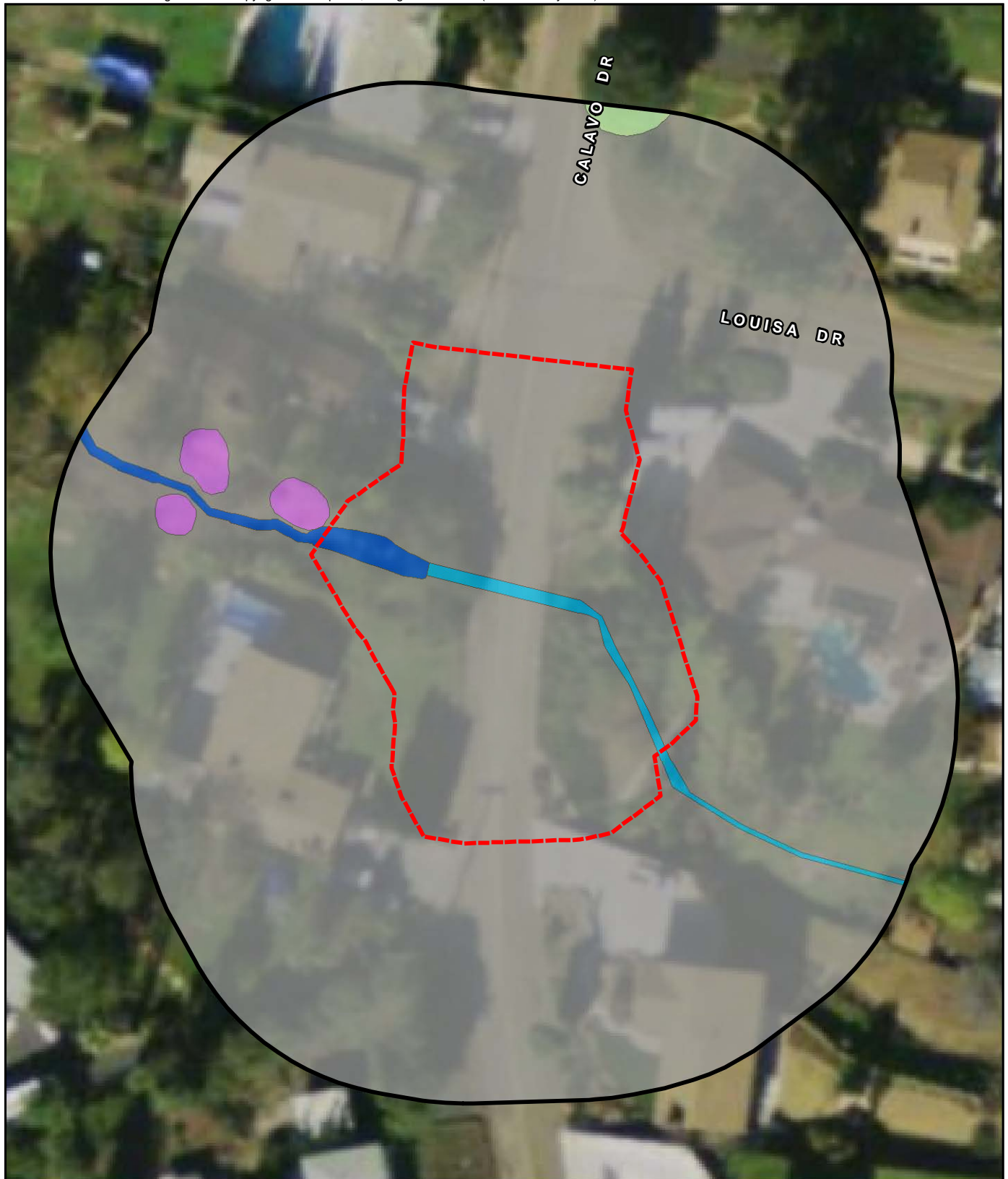
Through passive and active means, the natural vegetation on this portion of Mexican Canyon Creek has been almost entirely replaced by non-native vegetation, and the channel has been altered in various ways. A dam has been constructed just upstream of the site. A pipe in the dam allows water to flow through the slightly curving creek bottom until it reaches the CMP at Calavo Drive. East of Calavo Drive, a footbridge has been constructed across the creek allowing access from the backyard of the residence at the corner of Calavo Drive and Louisa Drive. East of Calavo Drive, the creek is channelized as it passes by more homes and reaches Avocado Boulevard. South of Highway 94 (approximately one-half mile southeast of the survey area), Mexican Canyon Creek supports a willow-dominated native riparian forest.


### **Habitats / Vegetation Communities**


A total of 25 plant species have been identified within the survey area. Of this total, 4 (16 percent) species are native to southern California, and 21 (84 percent) species are introduced. See Attachment 1 for a complete list of plant species identified within the survey area.

Five vegetation communities/land cover types have been mapped within the survey area: disturbed wetland, non-vegetated channel, southern riparian forest, coast live oak woodland, and urban/developed (Figure 4). Each of these vegetation communities/land cover types are described below. Vegetation community/land cover type classifications follow Holland (1986) as modified by Oberbauer (1996). Table 1 lists the vegetation communities with their respective sensitivity tiers (County of San Diego 2006) and acreages.





 Survey Area

 Construction Limits

**VEGETATION COMMUNITIES**

 Disturbed Wetland (11200)

 Non-vegetated Channel (13200)

 Coast Live Oak Woodland (71160)

 Southern Riparian Forest (61300)

 Urban/Developed (12000)



**FIGURE 4**

Existing Biological Resources

**TABLE 1**  
**VEGETATION COMMUNITIES/LAND COVER TYPES**

Type or Community (Modified Holland Code)	Tier	Acres
Disturbed Wetland (11200)	*	0.019
Non-Vegetated Channel (13200)	*	0.017
Southern Riparian Forest (61300)	I	0.021
Coast Live Oak Woodland (71160)	I	0.006
Urban/Developed (12000)	IV	2.411
<b>TOTAL</b>		<b>2.474</b>

\*Not assigned Tier but is considered sensitive under federal, state, and local jurisdictions.

**Disturbed Wetland (11200):** As Mexican Canyon Creek enters the survey area, it has been classified as a disturbed wetland vegetation community and is vegetated mostly with non-native herbaceous plants and annual grasses, including watercress (*Nasturtium officinale*), annual beard grass (*Polypogon monspeliensis*), and wild oats (*Avena* sp.). The banks are dominated by Bermuda grass (*Cynodon dactylon*) and various low-growing landscape plants. One large mule fat (*Baccharis salicifolia*) occurs on the north bank. A patch of spikerush (*Eleocharis* sp.) occurs within the Bermuda grass on the south bank. A total of 0.019 acre of disturbed wetland habitat occurs in the survey area.

**Non-Vegetated Channel (13200):** East of Calavo Drive, the drainage has been highly modified and is channelized into a linear drainage approximately 2.5 feet wide. No native biological features occur in this segment, and the banks are vegetated with landscape species such as purple trailing lantana (*Lantana montevidensis*) and various iceplants (*Mesembryanthemum* sp. and *Carpobrotus* sp.). A total of 0.017 acre of non-vegetated channel occur within the survey area.

**Southern Riparian Forest (61300):** Three large Fremont cottonwood (*Populus fremontii*) trees occur on the west side of the survey area. These trees are remnants of a riparian overstory and total approximately 0.021 acre. The canopies of the cottonwoods have been pruned, likely by the local residents. These trees are located outside of the APE, and are considered remnant trees and do not constitute a Southern Riparian Forest community.

**Coast Live Oak Woodland (71160):** Within the survey area, one remnant coast live oak (*Quercus agrifolia*; 0.006 acre) occurs on the northeast corner of Louisa Drive and Calavo Drive. This tree is located outside of the APE, and is considered remnant trees and does not constitute a Coast Live Oak Woodland community.

**Urban/Developed (12000):** The majority of the survey area (2.411 acres) consists of residential homes, landscape plants, and paved roads.

### **Special Status Species**

#### *Wildlife Species*

Wildlife species were recorded from the survey area on March 31 and April 5 (Attachment 2). The species detected in the survey are all adaptable and typically occur in human-altered environments.

One sensitive wildlife species, Cooper's hawk, was observed within the survey area. Attachment 3 summarizes the sensitive wildlife species that have a potential to occur based on known ranges and habitat preferences for the species. Species occurrence records from the CNDDDB indicate that no special status wildlife species are known to occur within one mile of the survey area.

**Cooper's hawk (*Accipiter cooperii*).** The Cooper's hawk is a CDFG species of special concern and a County of San Diego Group 1 sensitive species. Cooper's hawk nesting sites are considered sensitive by CDFG. The Cooper's hawk year-round range extends throughout most of the United States. Its wintering range extends south to Central America, and its breeding range extends north to southern Canada (Rosenfeld and Bielefeldt 1996). It is a common breeder in both natural and urban environments, known to nest in oak and willow riparian woodlands, as well as eucalyptus trees (Unitt 2004). Breeding occurs from March to July. This hawk forages primarily on medium-sized birds but is also known to eat small mammals such as chipmunks and other rodents (Rosenfeld and Bielefeldt 1996). The decline of this species had been caused by urbanization and loss of habitat. However, during the last 20 years, the Cooper's hawk has apparently adapted to city living (Unitt 2004).

One Cooper's hawk was observed flying over the survey area. Cooper's hawk is expected to forage within the survey area. There is a low potential for raptors to nest in the survey area as the scattered trees are of moderate height and pruned. No nests were observed in the survey area.

As the Cooper's hawk is widespread over San Diego's coastal slope within urban areas and natural habitats, wherever there are stands of trees, the survey area has low significance with respect to the regional population of Cooper's hawk.

#### *Plant Species*

Two special status plant species, California adolphia (*Adolphia californica*) and San Diego barrel cactus (*Ferocactus viridescens*), are historically known to occur within one mile of the survey area (State of California 2009e). Each of these species is typically found in coastal sage scrub habitat, which does not occur within the survey area.

No special status plants were observed or are expected to occur in the survey area. Attachment 4 summarizes the sensitive plants with the potential to occur within the survey area based on known ranges, habitat preferences for the species, species occurrence records from the CNDDDB.

#### **Jurisdictional Wetlands and Waterways**

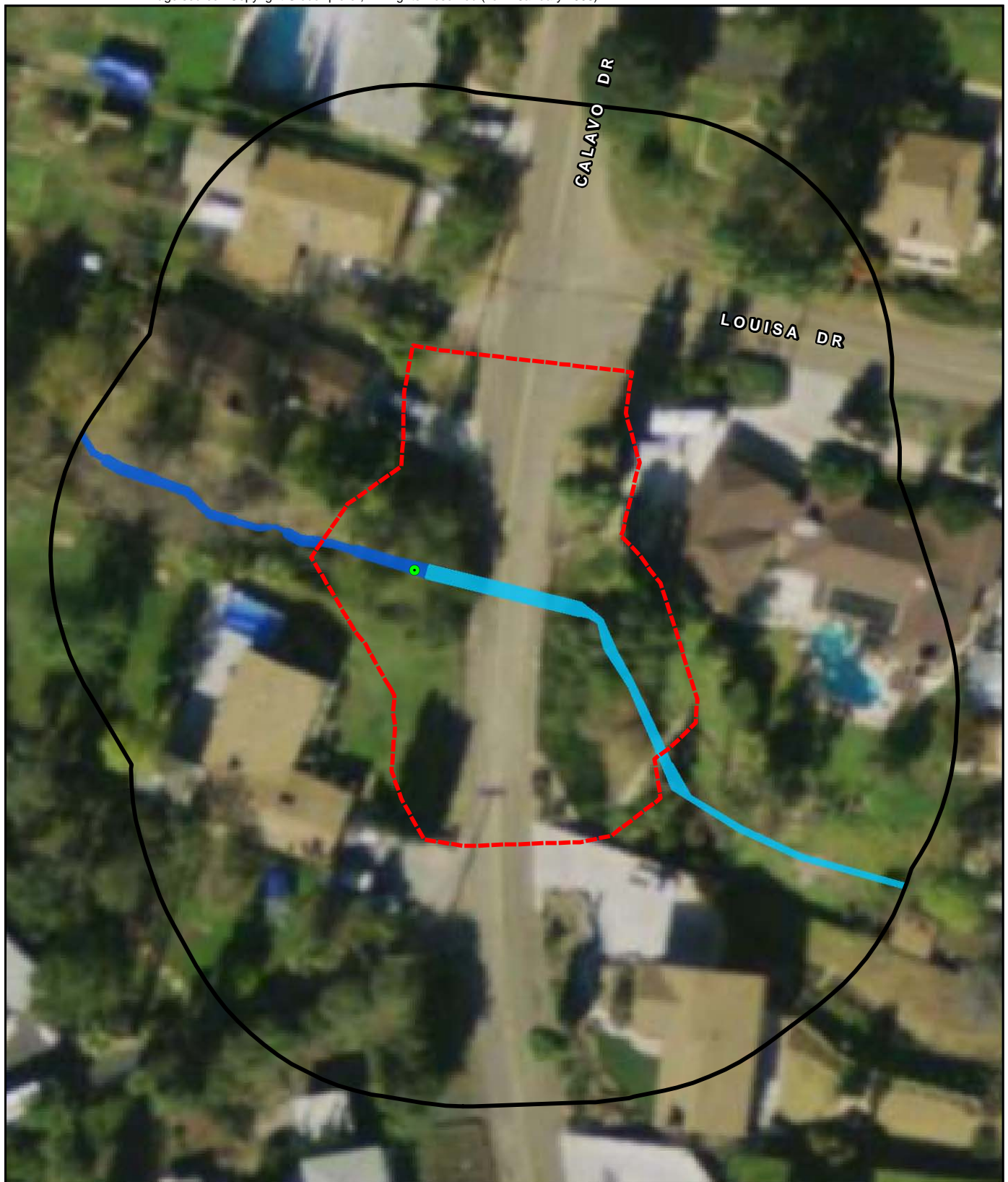
A total of 0.028 acres (383 linear feet) of ACOE jurisdictional resources were delineated in the survey area (Table 2; Figure 5). Wetland sites, which total 0.011 acre, exhibited positive indicators of each of the three criteria: hydrophytic vegetation, hydric soils, and wetland hydrology. A portion of the creek has been delineated as a non-wetland water of the U.S., totaling 0.017 acre.




CDFG jurisdictional resources were also delineated on-site (see Table 2; Figure 6). CDFG jurisdiction totals 0.057 acre, which includes the 0.028 acre of ACOE wetlands and non-wetland waters and additional riparian habitat outside the ordinary high water mark. In addition, the width of the channel within the disturbed wetland was generally mapped larger for CDFG, as the full bank width was larger than the ordinary high water mark.

**TABLE 2**  
**JURISDICTIONAL RESOURCES IN THE CALAVO DRIVE DRAINAGE IMPROVEMENT**  
**SURVEY AREA**



Jurisdictional Resources	Acres
<b>ACOE Resources</b>	<b>0.028</b>
Wetland	0.011
Non-wetland waters	0.017
<b>CDFG Resources</b>	<b>0.057</b>
Streambed	0.036
Riparian habitat	0.021





-  Survey Area
-  Construction Limits
-  Sample Point

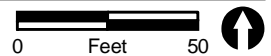
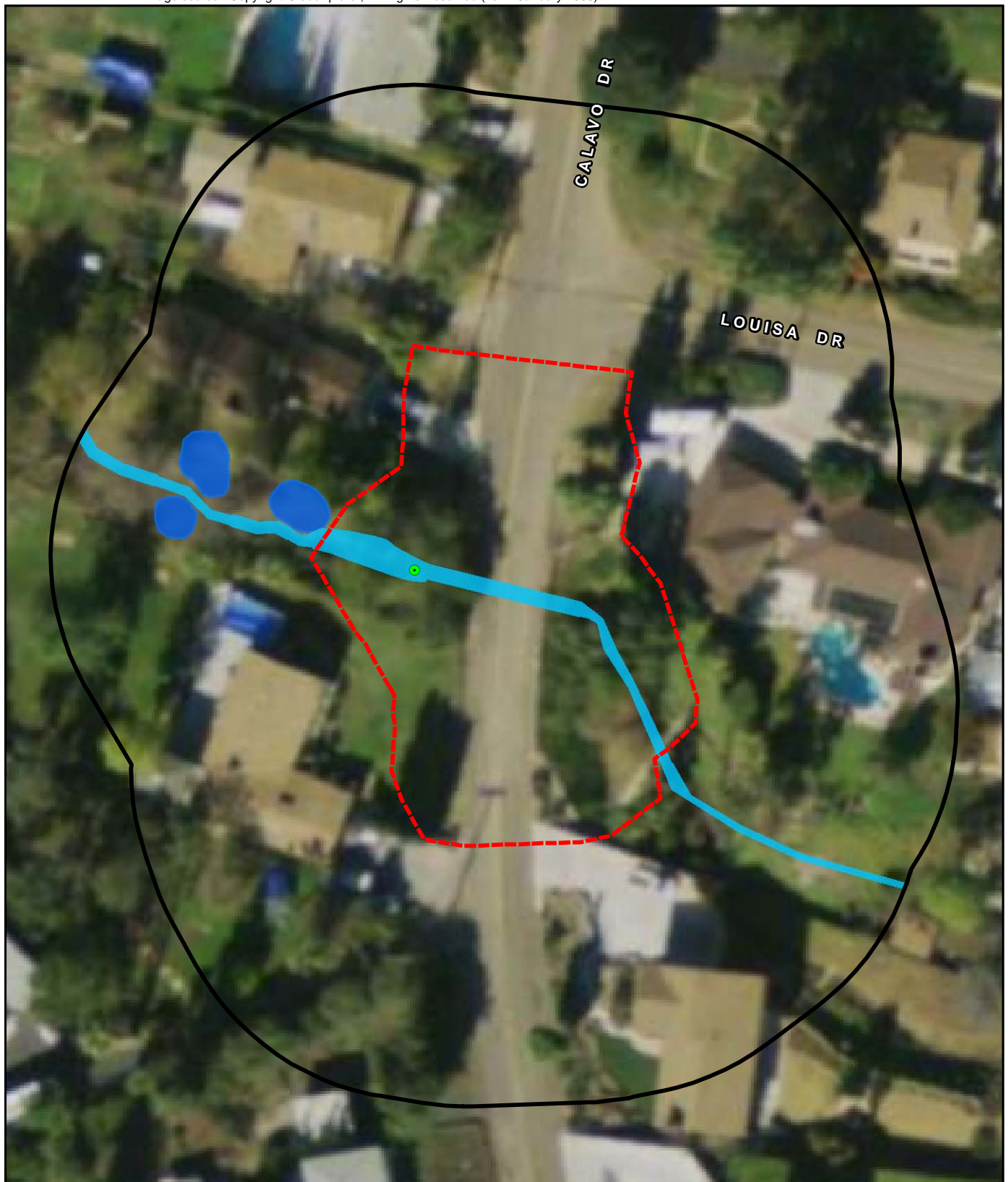
**ACOE JURISDICTIONAL WATERS**

-  Disturbed Wetland
-  Non-wetland Waters



**FIGURE 5**

Existing ACOE Jurisdictional Resources



- |                     |                                   |
|---------------------|-----------------------------------|
| Survey Area         | <b>CDFG JURISDICTIONAL WATERS</b> |
| Construction Limits | Riparian                          |
| Sample Point        | Streambed                         |



### **Other Unique Features / Resources**

Wildlife movement corridors and habitat linkages are areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Corridors are generally local pathways connecting short distances usually covering one or two main types of vegetation communities. Linkages are landscape level connections between very large core areas and generally span several thousand feet and cover multiple habitat types. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provide corridors and linkages for wildlife travel. The habitat connectivity provided by corridors and linkages is important in providing access to mates, food, and water, allowing the dispersal of individuals away from high population density areas, and facilitating the exchange of genetic traits between populations (Beier and Loe 1992).

The survey area lacks connectivity to form a true wildlife movement corridor. Mexican Canyon Creek provides connectivity for aquatic and semi-aquatic species (e.g., amphibians) to the Sweetwater River; however, the limited availability of native vegetation in and adjacent to the survey area prohibits large terrestrial wildlife movement along the watercourse. The scattered trees on-site provide low quality habitat for birds, including raptors. However, the site is constrained by development, and Mexican Canyon Creek lacks a sufficient buffer of native vegetation or open space to facilitate movement along the watercourse. No regional habitat linkages have been identified within or adjacent to the survey area.

### **Significance of Project Impacts and Proposed Mitigation**

#### *Sensitivity Criteria*

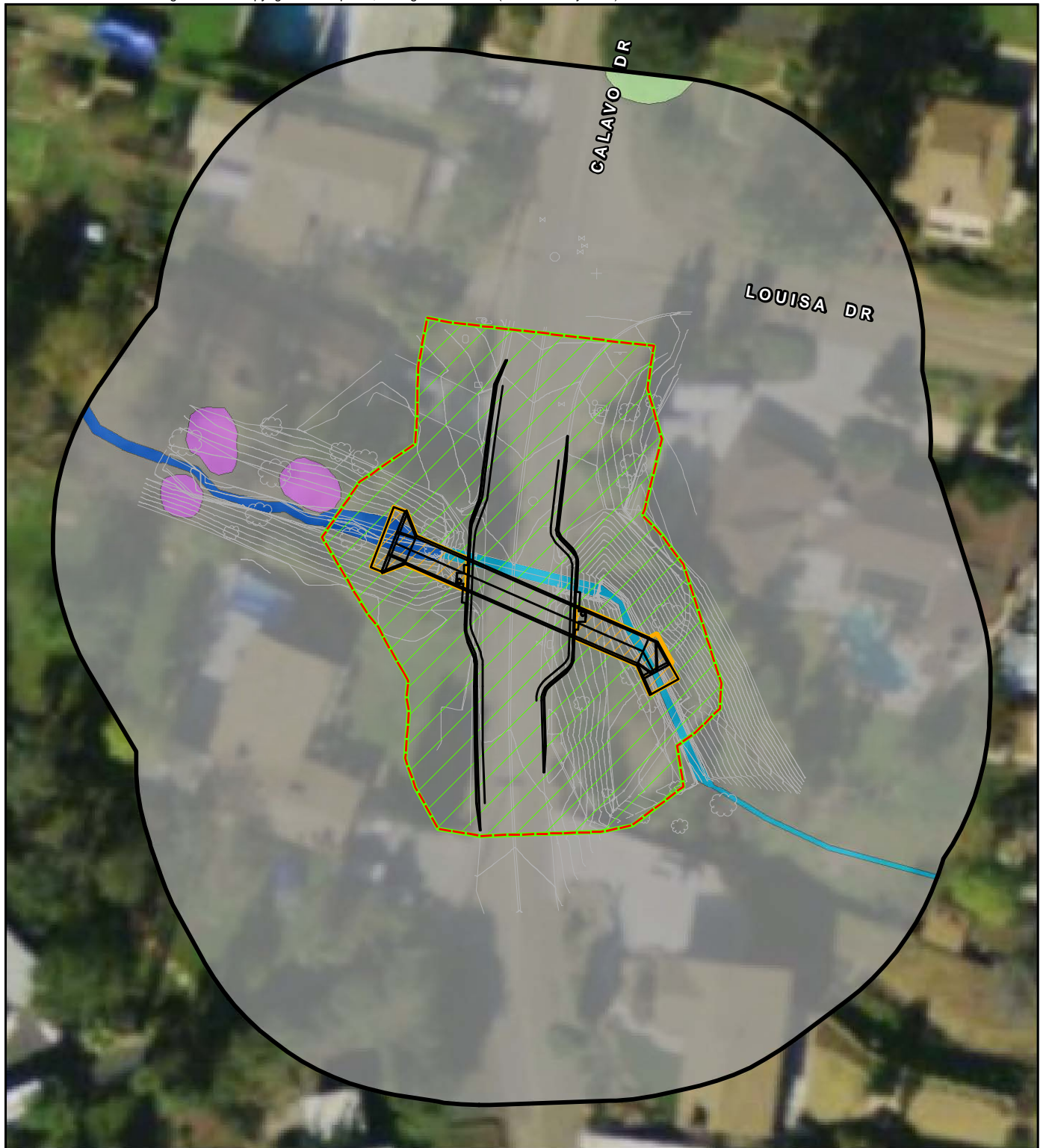
Plant or wildlife species are considered sensitive if they are (1) on List A, B, C, or D of the County of San Diego Sensitive Plant List, or in Group 1 or 2 of the County of San Diego Sensitive Animal List (County of San Diego 2006); (2) covered or listed as a narrow endemic under the Multiple Species Conservation Program (County of San Diego 1997); (3) listed by state or federal agencies as threatened or endangered or are proposed for listing; (4) on List 1B (considered endangered throughout its range) or List 2 (considered endangered in California but more common elsewhere) of the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (2007); or (5) considered rare, endangered, or threatened by the CNDDB (State of California 2009a-b) or local conservation organizations or specialists. Sensitive vegetation communities (i.e., natural communities) are those identified by the CDFG (State of California 2009c; Holland 1986) or the County of San Diego (2006).

Raptors (birds of prey) and active raptor nests are protected by the California Fish and Game Code 3503.5, which states that it is "unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird" unless authorized (State of California 1991).

All wetland areas, wetland buffer areas, and non-wetland waters of the U.S. are considered sensitive. Wetlands and non-wetland waters are under the jurisdiction of the ACOE. Streambeds and associated vegetation are under the jurisdiction of the CDFG. Waters of the state and waters of the U.S. are under the jurisdiction of the RWQCB.

#### *Project Impacts*

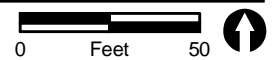
Permanent and temporary impacts are proposed for the Calavo Drive drainage improvement project (Figures 7, 8, and 9). Permanent impacts have been calculated for the placement of rip rap and the portion of box culvert that extends beyond Calavo Drive. The flow of water in the non-vegetated channel, including beneath Calavo Drive, and the surrounding habitat will be allowed to return to its current condition; therefore, these impacts are considered temporary.



- Survey Area
- Construction Limits
- Existing Conditions
- Proposed Project Site Plan
- Permanent Impacts
- Temporary Impacts

#### VEGETATION COMMUNITIES

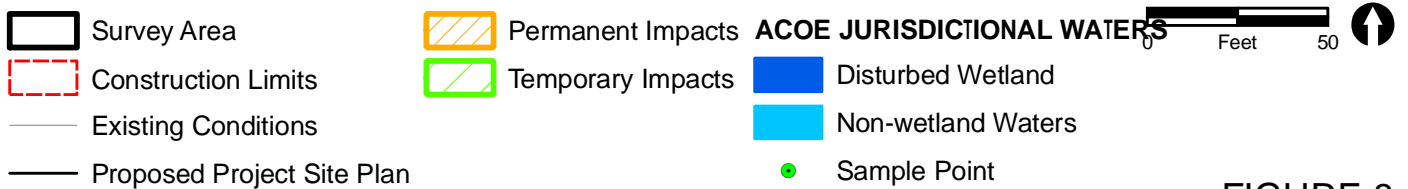
- Disturbed Wetland (11200)
- Non-vegetated Channel (13200)
- Coast Live Oak Woodland (71160)
- Southern Riparian Forest (61300)
- Urban/Developed (12000)



**FIGURE 7**

Impacts to Existing Biological Resources





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FIGURE 8  
Impacts to ACOE Jurisdictional Resources





- Survey Area
- Construction Limits
- Existing Conditions
- Proposed Project Site Plan

- Permanent Impacts
- Temporary Impacts

#### CDFG JURISDICTIONAL WATERS

- Riparian
- Streambed
- Sample Point

FIGURE 9

Impacts to CDFG Jurisdictional Resources



Table 3 summarizes the permanent and temporary impacts to the existing vegetation communities and land cover types. Permanent and temporary impacts will occur to disturbed wetland, non-vegetated channel, and urban/developed. No impacts will occur to southern riparian forest or coast live oak woodland.

**TABLE 3**  
**IMPACTS TO EXISTING VEGETATION COMMUNITIES/LAND COVER TYPES FOR THE**  
**CALAVO DRAINAGE IMPROVEMENT PROJECT**  
**(acres)**

Community/Land Cover	Tier	Existing	Permanent Impacts	Temporary Impacts	Total Impacts
Disturbed Wetland <sup>1</sup>	*	0.019	0.005	0.005	0.010
Non-Vegetated Channel <sup>1</sup>	*	0.017	0.002	0.009	0.011
Southern Riparian Forest	I	0.021	--	--	--
Coast Live Oak Woodland	I	0.006	--	--	--
Urban/Developed	IV	2.411	0.016	0.413	0.429
Total		2.474	0.023	0.427	0.450

\*Not assigned Tier but is considered sensitive under federal, state, and local jurisdictions.

<sup>1</sup>. Impacts have been identified and mitigation specified in previous MND prepared for the RGP-53 program. Agency permits issued previously as part of the RGP-53 program.

The proposed project would permanently impact 0.004 acre of ACOE jurisdictional resources, including 0.002 acre of wetlands and 0.002 acre of non-wetland waters (Table 4). Temporary impacts to ACOE jurisdictional resources would total 0.010 acre, including 0.001 acre of wetlands and 0.009 acre of non-wetland waters.

Permanent impacts to CDFG jurisdictional resources total 0.007 acre of streambed (Table 4). Temporary impacts would occur to 0.017 acre of streambed. No temporary or permanent impacts would occur to riparian habitat.

**TABLE 4**  
**JURISDICTIONAL RESOURCES PERMANENT IMPACTS FOR THE CALAVO DRAINAGE**  
**IMPROVEMENT PROJECT**  
**(acres)**

Jurisdictional Resources	Existing	Permanent Impacts	Temporary Impacts	Total Impact
<b>ACOE Resources<sup>1</sup></b>	<b>0.028</b>	<b>0.004</b>	<b>0.010</b>	<b>0.014</b>
Wetland	0.011	0.002	0.001	0.003
Non-wetland waters	0.017	0.002	0.009	0.011
<b>CDFG Resources<sup>1</sup></b>	<b>0.057</b>	<b>0.007</b>	<b>0.017</b>	<b>0.024</b>
Riparian habitat	0.036	--	--	--
Streambed	0.021	0.007	0.017	0.024*

\*This includes impacts to ACOE jurisdictional resources.

<sup>1</sup>. Impacts have been identified and mitigation specified in previous MND prepared for the RGP-53 program. Agency permits issued previously as part of the RGP-53 program.

The County of San Diego maintains and operates more than 1,080 facilities (i.e. culverts, bridges, road side ditches, drainage channels and road dips), throughout San Diego County. The County of San Diego Department of Public Works (DPW) periodically conducts routine flood control maintenance of these facilities to prevent flooding and erosion of adjacent roadways or flooding of residential or commercial property. The maintenance activities include silt, sand, debris and vegetation removal. These activities are necessary to ensure that storm flows can pass through these sites with minimal risk of loss of life and property damage from the storm events. The frequency with which these maintenance activities are conducted varies from site to site but ranges from more than twice per year to once every five years or longer. Many of these facilities occur along natural or modified stream courses that are under the jurisdiction of the U.S. Army Corps of Engineers (USACE), the California Regional Water Quality Control Board (RWQCB), and/or the California Department of Fish and Game (CDFG). Most of the proposed activities are also regulated by these agencies. Activities, which impact or could potentially impact federally endangered or threatened species, are regulated by the U.S. Fish and Wildlife Service (USFWS). The ongoing maintenance activities are being conducted in compliance with the requirements of Regional General Permit 53 (RGP 53). Environmental review for this program was conducted and a Negative Declaration was adopted by the County of San Diego Board on Supervisors, and subsequent Mitigation Monitoring Plan in December 1998. The Calavo Drainage Improvement project is one of the facilities that is included under the RGP-53 program, specifically, FC-103.

Impacts to jurisdictional resources in the survey area would require a 404 Nationwide Permit, a 1600 Streambed Alteration Agreement from CDFG, and a 401 certification from the California RWQCB. Typically, the threshold for impacts authorized under the Section 404 Nationwide Permit Program is less than 0.5 acre or 300 linear feet; therefore, this project is expected to be authorized under the Nationwide Permit Program.

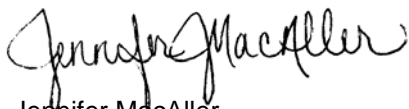
### **Cumulative Impacts**

As the proposed project's potential impacts to sensitive species (Cooper's hawk) will be avoided through specific design considerations and will be reduced to a level of less than significant, there are no cumulatively considerable impacts.

This project consists of improvements to existing structures, and minimal impacts to sensitive habitat and jurisdictional resources (i.e., disturbed wetland and non-vegetated channel) will be mitigated to a level of less than significant, consistent with mitigation specified in the RGP 53-MND.

Completion of the Calavo Drive Drainage Improvement Project is necessary to convey 100-year storm flows. The project consists of replacement of an existing structure in an already developed residential area; therefore, cumulative impacts are not significant.

Sincerely,



Jennifer MacAller  
Biologist

JJM:sjg

Enclosures



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Unitt, P.

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## **ATTACHMENTS**

## **ATTACHMENT 1**

**ATTACHMENT 1**  
**PLANT SPECIES OBSERVED IN THE CALAVO DRIVE DRAINAGE IMPROVEMENT SURVEY AREA**

Scientific Name	Common Name	Habitat	Origin
<b>ANGIOSPERMS: DICOTS</b>			
<b>AIZOACEAE</b>	<b>FIG-MARIGOLD FAMILY</b>		
<i>Carpobrotus edulis</i> (L.) Bolus.	hottentot fig	U/D	I
<i>Mesembryanthemum nodiflorum</i> L.	slender-leaved ice plant	U/D	I
<b>ANACARDIACEAE</b>	<b>SUMAC OR CASHEW FAMILY</b>		
<i>Schinus molle</i> L.	Peruvian pepper tree	U/D, DW	I
<i>Schinus terebinthifolius</i> Raddi	Brazilian pepper tree	U/D	I
<b>ASTERACEAE</b>	<b>SUNFLOWER FAMILY</b>		
<i>Baccharis salicifolia</i> (Ruiz Lopez & Pavón) Pers.	mule fat, seep-willow	DW	N
<i>Lactuca serriola</i> L.	prickly lettuce	DW, U/D	I
<i>Picris echioides</i> L.	bristly ox-tongue	DW, U/D	I
<i>Sonchus asper</i> (L.) Hill ssp. <i>asper</i>	prickly sow thistle	DW, U/D	I
<b>FABACEAE (LEGUMINOSAE)</b>	<b>LEGUME FAMILY</b>		
<i>Melilotus albus</i> Medikus	white sweet clover	U/D	I
<i>Melilotus indicus</i> (L.) All.	sourclover	U/D	I
<b>FAGACEAE</b>	<b>OAK FAMILY</b>		
<i>Quercus agrifolia</i> Née	coast live oak, encina	CLO	N
<b>MALVACEAE</b>	<b>MALLOW FAMILY</b>		
<i>Malva parviflora</i> L.	cheeseweed, little mallow	U/D	I
<b>MYRTACEAE</b>	<b>MYRTLE FAMILY</b>		
<i>Eucalyptus</i> sp.	eucalyptus	U/D	I
<b>MYRSINACEAE</b>			
<i>Anagallis arvensis</i> L.	scarlet pimpernel, poor-man's weatherglass*	U/D	I
<b>OXALIDACEAE</b>	<b>OXALIS FAMILY</b>		
<i>Oxalis pes-caprae</i> L.	Bermuda buttercup	U/D	I
<b>SALICACEAE</b>	<b>WILLOW FAMILY</b>		
<i>Populus fremontii</i> Wats. ssp. <i>fremontii</i>	Fremont cottonwood, alamo	RF	N
<b>ARECACEAE</b>	<b>PALM FAMILY</b>		
<i>Washingtonia robusta</i> Wendl.	Washington palm	DW, U/D	I
<b>CYPERACEAE</b>	<b>SEDGE FAMILY</b>		
<i>Eleocharis</i> sp.	spikerush	DW	N



**ATTACHMENT 1**  
**PLANT SPECIES OBSERVED**  
**(continued)**

Scientific Name	Common Name	Habitat	Origin
<b>POACEAE (GRAMINEAE)</b>	<b>GRASS FAMILY</b>		
<i>Avena</i> sp.	wild oats	DW, U/D	I
<i>Bromus diandrus</i> Roth.	ripgut grass	U/D	I
<i>Cynodon dactylon</i> (L.) Pers.	Bermuda grass	DW, U/D	I
<i>Piptatherum [=Oryzopsis] miliaceum</i> (L.) Cosson	smilo grass	DW	I
<i>Polypogon monspeliensis</i> (L.) Desf.	annual beard grass	DW	I
<i>Schismus barbatus</i> (L.) Thell.	Mediterranean grass	U/D	I
<b>VERBENACEAE</b>	<b>VERBENA FAMILY</b>		
<i>Lantana montevidensis</i> (K. Spreng.) Briq.	wild oats	U/D	I

**HABITATS**

DW = Disturbed Wetland  
 RF = Southern Riparian Forest  
 CLO = Coast Live Oak Woodland  
 U/D = Urban/Developed

**OTHER TERMS**

N = Native to locality  
 I = Introduced species from outside locality

## **ATTACHMENT 2**

**ATTACHMENT 2**  
**WILDLIFE SPECIES OBSERVED/DETECTED IN THE CALAVO DRIVE DRAINAGE IMPROVEMENT SURVEY AREA**

Scientific Name	Common Name	Occupied Habitat	Status	Evidence of Occurrence
<b>INVERTEBRATES</b> (Nomenclature from Erikson and Belk 1999, Milne and Milne 1980, Mattoni 1990, and Opler and Wright 1990)				
<b>HESPERIIDAE</b> <i>Hylephila phyleus</i>	<b>SKIPPERS</b> Fiery skipper	U/D		O
<b>PIERIDAE</b> <i>Pontia protodice</i>	<b>WHITES &amp; SULPHURS</b> Common or checkered white	U/D		O
<b>NYMPHALIDAE</b> <i>Vanessa cardui</i>	<b>BRUSH-FOOTED BUTTERFLIES</b> Painted lady	U/D		O
<b>REPTILES</b> (Nomenclature from Crother 2001 and Crother et. al. 2003)				
<b>IGUANIDAE</b> <i>Sceloporus occidentalis</i>	<b>IGUANID LIZARDS</b> Western fence lizard	U/D		O
<b>BIRDS</b> (Nomenclature from American Ornithologists' Union 1998)				
<b>ACCIPITRIDAE</b> <i>Accipiter cooperii</i>	<b>HAWKS, KITES, &amp; EAGLES</b> Cooper's hawk	RF	CSC, MSCP	O
<i>Buteo jamaicensis</i>	Red-tailed hawk	RF, U/D		O
<i>Buteo lineatus elegans</i>	Red-shouldered hawk	RF, U/D		O
<b>COLUMBIDAE</b> <i>Zenaida macroura marginella</i>	<b>PIGEONS &amp; DOVES</b> Mourning dove	U/D		O
<b>TROCHILIDAE</b> <i>Calypte anna</i>	<b>HUMMINGBIRDS</b> Anna's hummingbird	U/D		O
<b>TYRANNIDAE</b> <i>Tyrannus vociferans vociferans</i>	<b>TYRANT FLYCATCHERS</b> Cassin's kingbird	U/D		O
<b>CORVIDAE</b> <i>Aphelocoma californica</i>	<b>CROWS, JAYS, &amp; MAGPIES</b> Western scrub-jay	U/D		O



**ATTACHMENT 2**  
**WILDLIFE SPECIES OBSERVED/DETECTED IN THE CALAVO DRIVE DRAINAGE IMPROVEMENT SURVEY AREA**  
**(continued)**

Scientific Name	Common Name	Occupied Habitat	Status	Evidence of Occurrence
<i>Corvus brachyrhynchos hesperis</i>	American crow	U/D		O
<b>AEGITHALIDAE</b>	<b>BUSHTIT</b>			
<i>Psaltriparus minimus minimus</i>	Bushtit	U/D		O
<b>TROGLODYTIDAE</b>	<b>WRENS</b>			
<i>Thryomanes bewickii</i>	Bewick's wren	U/D		O
<b>MIMIDAE</b>	<b>MOCKINGBIRDS &amp; THRASHERS</b>			
<i>Mimus polyglottos polyglottos</i>	Northern mockingbird	U/D		O
<b>PARULIDAE</b>	<b>WOOD WARBLERS</b>			
<i>Dendroica coronata</i>	Yellow-rumped warbler	U/D		O
<b>EMBERIZIDAE</b>	<b>EMBERIZIDS</b>			
<i>Melospiza lincolnii</i>	Lincoln's sparrow	U/D		O
<i>Melospiza melodia</i>	Song sparrow	DW		O
<i>Pipilo crissalis</i>	California towhee	U/D		O
<i>Zonotrichia leucophrys</i>	White-crowned sparrow	U/D		O
<b>ICTERIDAE</b>	<b>BLACKBIRDS &amp; NEW WORLD ORIOLES</b>			
<i>Icterus cucullatus nelsoni</i>	Hooded oriole	DW, U/D		O
<b>FRINGILLIDAE</b>	<b>FINCHES</b>			
<i>Carduelis psaltria hesperophilus</i>	Lesser goldfinch	U/D		O
<i>Carpodacus mexicanus frontalis</i>	House finch	U/D		O
<b>PASSERIDAE</b>				
<i>Passer domesticus</i>	House sparrow (I)	U/D		O

**ATTACHMENT 2**  
**WILDLIFE SPECIES OBSERVED/DETECTED IN THE CALAVO DRIVE DRAINAGE IMPROVEMENT SURVEY AREA**  
**(continued)**

Habitats

Ag	= Agriculture
B	= Bays
C	= Coastal waters
CD	= Coastal strand, coastal dunes
CF	= Coniferous forest
CMC	= Coastal mixed chaparral, mixed chaparral, chamise chaparral
CSS	= Coastal sage scrub, inland sage scrub
F	= Flying overhead
FM	= Freshwater marsh
FW	= Foothill woodland
G	= Grassland, pasturelands, etc.
ISS	= Inland sage scrub
M	= Mesic areas and wetlands
Mu	= Mud flats
O	= Open places, waste places, roadsides, burns, etc.
OW	= Open water (reservoirs, ponds, streams, lakes)
P	= Pelagic
RW	= Riparian woodlands
SDS	= Sonoran desert scrub
SM	= Saltwater marsh
U	= Urban
W	= Woodlands

Evidence of Occurrence

V	= Vocalization
O	= Observed
T	= Track
S	= Scat
D	= Den site
B	= Burrow
C	= Carcass/remains

Status

BEPA	= Bald and Golden Eagle Protection Act
FC	= Federal candidate for listing (taxa for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threat(s) to support proposals to list as endangered or threatened; development and publication of proposed rules for these taxa are anticipated)
CFP	= California fully protected species
CSC	= California Department of Fish and Game species of special concern
FE	= Listed as endangered by the federal government
FPT	= Federally proposed threatened
FSS	= Federal (BLM or USFS) sensitive species
FT	= Listed as threatened by the federal government
MSCP	= Multiple Species Conservation Program target species list
PSE	= Proposed as endangered by the state of California
SCT	= California candidate for listing as threatened
SDC	= City of San Diego Resource Protection Ordinance "Sensitive Species"
SE	= Listed as endangered by the state of California
ST	= Listed as threatened by the state of California
*	= Taxa listed with an asterisk fall into one or more of the following categories: <ul style="list-style-type: none"> <li>• Taxa considered endangered or rare under Section 15380(d) of CEQA guidelines</li> <li>• Taxa that are biologically rare, very restricted in distribution, or declining throughout their range</li> <li>• Population(s) in California that may be peripheral to the major portion of a taxon's range, but which are threatened with extirpation within California</li> <li>• Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands)</li> </ul>

## **ATTACHMENT 3**



**ATTACHMENT 3**  
**SENSITIVE WILDLIFE SPECIES OCCURRING OR WITH THE POTENTIAL TO OCCUR IN THE CALAVO DRIVE DRAINAGE IMPROVEMENT SURVEY AREA**

Species' Scientific Name/ Common Name	Sensitivity Code & Status	Habitat Preference/ Requirements	Verified On Site?	Potential to Occur On Site	Factual Basis for Determination of Occurrence Potential
<b>INVERTEBRATES</b> (Nomenclature from Eriksen and Belk 1999; Mattoni 1990 and Opler and Wright 1999)					
<b>HESPERIIDAE</b>	<b>SKIPPERS</b>				
Saltmarsh or wandering skipper <i>Panoquina errans</i>	MSCP, Group 1	Salt marshes. Host plant <i>Distichlis spicata</i> . Adult emergence July–September.	No	Not Expected	Host plant not observed in survey area.
<b>NYMPHALIDAE</b>	<b>BRUSH-FOOTED BUTTERFLIES</b>				
Quino checkerspot butterfly <i>Euphydryas editha quino</i>	FE, Group 1	Open, dry areas in foothills, mesas, lake margins. Larval host plant <i>Plantago erecta</i> . Adult emergence mid-January through April.	No	Not Expected	Host plant not observed in survey area. Suitable habitat not present.
<b>AMPHIBIANS</b> (Nomenclature from Crother 2001 and Crother et al. 2003)					
<b>PELOBATIDAE</b>	<b>SPADEFoot TOADS</b>				
Western spadefoot <i>Spea hammondi</i>	FSS, CSC, Group 2	Vernal pools, floodplains, and alkali flats within areas of open vegetation.	No	Low	Not detected. Limited suitable habitat present.

**ATTACHMENT 3**  
**SENSITIVE WILDLIFE SPECIES OCCURRING OR WITH THE POTENTIAL TO OCCUR IN THE CALAVO DRIVE DRAINAGE IMPROVEMENT**  
**SURVEY AREA**  
**(continued)**

Species' Scientific Name/ Common Name	Sensitivity Code & Status	Habitat Preference/ Requirements	Verified On Site?	Potential to Occur On Site	Factual Basis for Determination of Occurrence Potential
<b>BUFONIDAE</b>	<b>TRUE TOADS</b>				
Arroyo toad <i>Bufo californicus</i>	FE, CSC, MSCP, Group 1	Open streamside sand/gravel flats. Quiet, shallow pools along stream edges are breeding habitat. Nocturnal except during breeding season (March–July).	No	Not Expected	Creek does not support pools, riffles, shallow pools. Creek is highly altered by man, narrow, and confined.
<b>REPTILES</b> (Nomenclature from Crother 2001 and Crother et al. 2003)					
<b>TEIIDAE</b>	<b>WHIPTAIL LIZARDS</b>				
Belding's orange-throated whiptail <i>Aspidoscelis hyperythra</i> <i>beldingi</i>	CSC, MSCP, Group 2	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	No	Not Expected	Suitable habitat not present.
Coastal western whiptail <i>Aspidoscelis tigris stejnegeri</i>	*, Group 2	Coastal sage scrub, chaparral, woodlands, and streamsides where plants are sparsely distributed.	No	Low	Limited available habitat available. Site is surrounded by development.
<b>COLUBRIDAE</b>	<b>COLUBRID SNAKES</b>				
Two-striped garter snake <i>Thamnophis hammondi</i>	FSS, CSC, *, Group 1	Permanent freshwater streams with rocky bottoms. Mesic areas.	No	Low	Limited available habitat available. Site is surrounded by development.

**ATTACHMENT 3**  
**SENSITIVE WILDLIFE SPECIES OCCURRING OR WITH THE POTENTIAL TO OCCUR IN THE CALAVO DRIVE DRAINAGE IMPROVEMENT**  
**SURVEY AREA**  
**(continued)**

Species' Scientific Name/ Common Name	Sensitivity Code & Status	Habitat Preference/ Requirements	Verified On Site?	Potential to Occur On Site	Factual Basis for Determination of Occurrence Potential
<b>BIRDS</b> (Nomenclature from American Ornithologists' Union 1998 and Unitt 1984)					
<b>ACCIPITRIDAE</b>	<b>HAWKS, KITES, &amp; EAGLES</b>				
White-tailed kite (nesting) <i>Elanus leucurus</i>	CFP, *, Group 1	Nest in riparian woodland, oaks, sycamores. Forage in open, grassy areas. Year-round resident.	No	Low	Limited available nesting trees and limited foraging habitat.
Northern harrier (nesting) <i>Circus cyaneus</i>	CSC, MSCP, Group 1	Coastal lowland, marshes, grassland, agricultural fields. Migrant and winter resident, rare summer resident.	No	Not Expected	Lack of suitable habitat in the survey area. Site is surrounded by development.
Sharp-shinned hawk (nesting) <i>Accipiter striatus</i>	CSC, Group 1	Open deciduous woodlands, forests, edges, parks, residential areas. Migrant and winter visitor.	No	Low	Limited available foraging habitat.
Cooper's hawk (nesting) <i>Accipiter cooperii</i>	CSC, MSCP, Group 1	Mature forest, open woodlands, wood edges, river groves. Parks and residential areas. Migrant and winter visitor.	Yes	Observed foraging	Observed flying overhead near cottonwood trees. Expected to forage on-site. Low potential to nest in survey area. Scattered trees available.



**ATTACHMENT 3**  
**SENSITIVE WILDLIFE SPECIES OCCURRING OR WITH THE POTENTIAL TO OCCUR IN THE CALAVO DRIVE DRAINAGE IMPROVEMENT**  
**SURVEY AREA**  
**(continued)**

Species' Scientific Name/ Common Name	Sensitivity Code & Status	Habitat Preference/ Requirements	Verified On Site?	Potential to Occur On Site	Factual Basis for Determination of Occurrence Potential
<b>TYRANNIDAE</b>	<b>TYRANT FLYCATCHERS</b>				
Southwestern willow flycatcher (nesting) <i>Empidonax traillii extimus</i>	FE, SE, MSCP, Group 1	Nesting restricted to willow thickets. Also occupies other woodlands. Rare spring and fall migrant, rare summer resident. Extremely localized breeding.	No	Not Expected	Lack of suitable willow thicket habitat.
<b>VIREONIDAE</b>	<b>VIREOS</b>				
Least Bell's vireo (nesting) <i>Vireo bellii pusillus</i>	FE, SE, BCC, MSCP, Group 1	Willow riparian woodlands. Summer resident.	No	Not Expected	Lack of suitable riparian habitat. No shrub layer in wetlands.
<b>SYLVIIDAE</b>	<b>GNATCATCHERS</b>				
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT, CSC, MSCP, Group 1	Coastal sage scrub, maritime succulent scrub. Resident.	No	Not Expected	Lack of suitable scrub habitat.
<b>PARULIDAE</b>	<b>WOOD WARBLERS</b>				
Yellow warbler (nesting) <i>Dendroica petechia brewsteri</i>	CSC, Group 2	Breeding restricted to riparian woodland. Spring and fall migrant, localized summer resident, rare winter visitor.	No	Not Expected	Lack of suitable riparian habitat.

**ATTACHMENT 3**  
**SENSITIVE WILDLIFE SPECIES OCCURRING OR WITH THE POTENTIAL TO OCCUR IN THE CALAVO DRIVE DRAINAGE IMPROVEMENT**  
**SURVEY AREA**  
**(continued)**

Species' Scientific Name/ Common Name	Sensitivity Code & Status	Habitat Preference/ Requirements	Verified On Site?	Potential to Occur On Site	Factual Basis for Determination of Occurrence Potential
Yellow-breasted chat (nesting) <i>Icteria virens</i>	CSC, Group 1	Dense riparian woodland. Localized summer resident.	No	Not Expected	Lack of suitable riparian habitat.
<b>MAMMALS</b> (Nomenclature from Jones et al. 1997 and Hall 1981)					
<b>FELIDAE</b>	<b>CATS</b>				
Mountain lion <i>Puma concolor</i>	MSCP, Group 2	Many habitats.	No	Not Expected	Survey area is surrounded by development.
<b>CERVIDAE</b>	<b>DEER</b>				
Southern mule deer <i>Odocoileus hemionus fuliginata</i>	MSCP, Group 2	Many habitats.	No	Not Expected	Survey area is surrounded by development.

**STATUS CODES**

**LISTED/PROPOSED**

- FE = Listed as endangered by the federal government
- FPE = Federally proposed endangered
- FPT = Federally proposed threatened
- FT = Listed as threatened by the federal government
- SE = Listed as endangered by the state of California
- ST = Listed as threatened by the state of California

**ATTACHMENT 3**  
**SENSITIVE WILDLIFE SPECIES OCCURRING OR WITH THE POTENTIAL TO OCCUR IN THE CALAVO DRIVE DRAINAGE IMPROVEMENT**  
**SURVEY AREA**  
**(continued)**

**OTHER**

- BEPA = Bald and Golden Eagle Protection Act  
FSS = Federal (BLM or USFS) sensitive species  
CFP = California fully protected species  
CSC = California Department of Fish and Game species of special concern  
FC = Federal candidate for listing (taxa for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threat(s) to support proposals to list as endangered or threatened; development and publication of proposed rules for these taxa are anticipated)  
MSCP = Multiple Species Conservation Program covered species  
PSE = Proposed as endangered by the state of California  
\* = Taxa listed with an asterisk fall into one or more of the following categories:
- Taxa considered endangered or rare under Section 15380(d) of CEQA guidelines
  - Taxa that are biologically rare, very restricted in distribution, or declining throughout their range
  - Population(s) in California that may be peripheral to the major portion of a taxon's range, but which are threatened with extirpation within California
  - Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands)

**COUNTY OF SAN DIEGO SENSITIVE SPECIES**

- Group 1 = Rare, threatened, or endangered in California  
Group 2 = Rare, threatened, or endangered in California but more common elsewhere

## **ATTACHMENT 4**



**ATTACHMENT 4**  
**SENSITIVE PLANT SPECIES**  
**OBSERVED (†) OR WITH THE POTENTIAL FOR OCCURRENCE**

Scientific / Common Name	Sensitivity Code & Status	Habitat Preference/ Requirements	Verified On Site?	Potential to Occur On Site	Factual Basis for Determination of Occurrence Potential
<b>ANGIOSPERMS: DICOTS</b>					
<b>ASTERACEAE</b>	<b>SUNFLOWER FAMILY</b>				
<i>Artemisia palmeri</i> San Diego sagewort	4, Group D	Deciduous shrub; coastal sage scrub, chaparral, riparian, mesic, sandy areas; blooms May–Sept.; elevation less than 3,000 feet.	No	Not Expected	Not observed. Limited available habitat.
<i>Iva hayesiana</i> San Diego marsh-elder	2, Group B	Perennial herb; marshes and swamps, playas, riparian areas; blooms April–Sept.; elevation below 1,700 feet.	No	Not Expected	Not observed. Limited available habitat.
<b>BRASSICACEAE</b>	<b>MUSTARD FAMILY</b>				
<i>Nasturtium [=Rorippa] gambellii</i> Gambel's water cress	FE, CT, 1B, Group A	Perennial herb; marshes and swamps; blooms April–Sept.; elevation less than 1,100 feet.	No	Not Expected	Limited range and lack of suitable habitat.
<b>CACTACEAE</b>	<b>CACTUS FAMILY</b>				
<i>Ferocactus viridescens</i> San Diego barrel cactus	2, Group B, MSCP	Succulent; chaparral, coastal sage scrub, valley and foothill grassland, vernal pools; blooms May–June; elevation less than 1,500 feet.	No	Not Expected	Historic record from within one mile of survey area (State of California 2009). Suitable habitat not present.

**ATTACHMENT 4**  
**SENSITIVE PLANT SPECIES**  
**OBSERVED (†) OR WITH THE POTENTIAL FOR OCCURRENCE**  
**(continued)**

Scientific / Common Name	Sensitivity Code & Status	Habitat Preference/ Requirements	Verified On Site?	Potential to Occur On Site	Factual Basis for Determination of Occurrence Potential
<b>FAGACEAE</b>	<b>OAK FAMILY</b>				
<i>Quercus engelmannii</i> Engelmann oak	4, Group D	Tree; cismontane and riparian woodland, valley and foothill grasslands, chaparral; blooms March–May; elevation 400–4,300 feet.	No	Not Expected	Not observed in survey area. Would have been apparent. Site is at lower edge of elevation range.
<b>RHAMNACEAE</b>	<b>BUCKTHORN FAMILY</b>				
<i>Adolphia californica</i> California adolphia	2, Group B	Deciduous shrub; Diegan coastal sage scrub and chaparral; clay soils; blooms Dec.–May; elevation 100–1,000 feet.	No	Not Expected	Historic record from within one mile of survey area (State of California 2009). Suitable habitat not present.
<b>ANGIOSPERMS: MONOCOTS</b>					
<b>JUNCACEAE</b>	<b>RUSH FAMILY</b>				
<i>Juncus acutus</i> ssp. <i>leopoldii</i> Southwestern spiny rush	4, Group D	Perennial herb; coastal dunes , meadows and seeps, coastal salt marsh, riparian; blooms May–June; elevation less than 3,000 feet.	No	Not Expected	Limited available habitat present. Would have been apparent at time of survey. Not observed.

**SENSITIVITY CODES**

**FEDERAL CANDIDATES AND LISTED PLANTS**

FE = Federally listed endangered

FT = Federally listed threatened

FC = Federal candidate for listing as endangered or threatened

**STATE LISTED PLANTS**

CE = State listed endangered

CR = State listed rare

CT = State listed threatened

**ATTACHMENT 4**  
**SENSITIVE PLANT SPECIES**  
**OBSERVED (†) OR WITH THE POTENTIAL FOR OCCURRENCE**  
**(continued)**

**COUNTY OF SAN DIEGO**

- NE = Narrow endemic
- MSCP = Multiple Species Conservation Program covered species
- List A = Plants rare, threatened, or endangered in California
- List B = Plants rare, threatened, or endangered in California but more common elsewhere
- List D = Plants limited in distribution and uncommon but not presently rare or endangered

**CALIFORNIA NATIVE PLANT SOCIETY LISTS**

- 1B = Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing.
- 2 = Species rare, threatened, or endangered in California but more common elsewhere. These species are eligible for state listing.
- 4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.